

Prof. Newton, to whose assistance I am in many ways indebted, has drawn attention to Dr. Weismann's 'Essays on Heredity,' particularly one on the duration of animal life, where the uniformity with which birds maintain their numbers, which I have before referred to, is dwelt upon, and several other questions bearing on the age of birds. Dr. Weismann is of opinion that all birds and mammals outlive the period of reproduction, but in the case of birds the facts I have collected rather show the contrary. He also thinks that only in the largest mammalia—whales and elephants—is the duration of life equal to the longest-lived birds, but on this head we require more facts.

So far as birds are concerned, the points on which further information is wanted are principally:—

1. Are birds of some families longer-lived than those of others ?
2. Do female birds live longer than males ?
3. Are birds which are long in their incubation therefore long-lived ?
4. Do large birds live longer than small ones ?
5. Do birds in general live as long as mammals ?
6. Do birds which lay only one egg live longer than birds which lay ten ?

Reference may also be made to Prof. Ray Lankester's work on the 'Comparative Longevity in Man and the Lower Animals.'

V.—*An Epitome of Dr. Walter's Ornithological Results of a Voyage to East Spitsbergen, in the Year 1889* *. By WILLIAM EAGLE CLARKE, F.L.S.

THIS valuable paper on the birds observed by the Expedition to East Spitsbergen promoted by the Bremen

* "Ornithologische Ergebnisse der von der Bremer geographischen Gesellschaft im Jahre 1889 veranstalteten Reise nach Ostspitzbergen. Von Dr. Alfred Walter. (Aus dessen hinterlassenen Notizen bearbeitet von Prof. Dr. Willy Kükenenthal.)" *Journal für Ornithologie*, xxxviii. Jahrg. No. 190, pp. 233-255 (April 1890).

Geographical Society appears to have been little noticed by British ornithologists, even by some who are particularly interested in the Arctic avifauna. For instance, Mr. Trevor-Battye can hardly have been aware of its existence, or he would not have omitted from his "Birds of Spitsbergen as at present determined" (*Ibis*, 1897, pp. 574–600) such species as the Dunlin and the Knot, discovered by Dr. Walter, as well as the first record of the Sanderling, together with other valuable matter, to which he would doubtless have referred.

Dr. Walter's contribution to our knowledge of the ornithology of the European Polar area is of special interest and importance, since it treats of the eastern islands and seas of the Spitsbergen Archipelago, a region of which the avifauna has been but slightly investigated. I therefore hope that this summary may prove of use to those who are unacquainted with the original German version.

The Bremen Expedition arrived at Spitsbergen in May 1889, and spent the summer on the east coast, devoting its attention to geographical and scientific investigations. Dr. Walter did not live to publish the results, but his notes were prepared for publication by his companion, Professor Kükenthal.

The contribution opens with a few notes on the birds observed on the coast of Northern Scandinavia during April and early May, while on the outward voyage. The results proper are treated of under the following headings or sections—(1) Dates of Migration; (2) Breeding-Dates; (3) Nature of Food; (4) Ornithology of Whale's Point Harbour and neighbourhood*; (5) Ornithology of King Ludwig Islands†; (6) Ornithology of Ryk-Ys Islands; (7) Ornithology of King Charles Islands; (8) Ornithology of the east coast of Barents Island; (9) Ornithology of the Olga Straits.

* Whale's Point Harbour is situated at the south-west corner of Edge Island.

† This small group of islands is about four miles from Whale's Point and lies off the entrance of Deevie Bay, on the south-western coast of Edge Island. The observations were chiefly made on the middle island, named Barentine Island, where the ship of the Expedition was lost.

At the close of the contribution is given a list of all the birds which have been or are supposed to have been observed in the archipelago, 43 in number. This is followed by a comparison between the ornithology of the east and west coasts; and finally between the avifauna of the east coast of Spitsbergen and that of Franz Josef Land.

In this epitome I have considered it sufficient, without giving an exact translation, to afford the *essential* information regarding each species observed in the various places visited by the Expedition.

I have, however, quoted *in extenso* the statements concerning the species added to the fauna, and have reproduced pretty fully what is said concerning some of the more interesting forms.

I have thought it best to retain the zoological nomenclature of the original contribution.

PLECTROPHANES NIVALIS.

Whale's Point Harbour. On our first visit, May 29th to June 7th, the Snow-Bunting was in great numbers and building its nest. Later, August 18th to 21st, it was in family parties and preparing for departure.

King Ludwig Islands. June 12th to 14th: many pairs on each island (p. 246). Observed in family parties in August (p. 248).

[Mr. Arnold Pike saw a flock on "Kong Karl Land" on August 20th, 1897 (Geogr. Journ. xi. p. 368).—W. E. C.]

ANSER BRACHYRHYNCHUS.

Whale's Point Harbour. The Pink-footed Goose was observed on the 29th and 31st of May in small parties of three or four" (p. 243).

BERNICLA BRENTA.

Whale's Point Harbour. The Brent Goose was observed in flights, from 29th May to June 7th (p. 243); and again between August 18th and 21st (p. 245).

King Ludwig Islands. June 12th to 14th, nesting in great numbers (p. 247).

Ryk-Ys Islands. July 30th: three young in down found, but as no old birds were seen they are somewhat doubtfully referred to this species. They may have been the young of *B. leucopsis* (p. 249).

BERNICLA LEUCOPSIS.

Whale's Point Harbour. "On the 29th of May and 6th of June, I believe I saw examples of this species, but at so great a distance as not to be certain" (p. 242).

Ryk-Ys Islands. See under previous species.

HARELDA GLACIALIS.

Whale's Point Harbour. The Long-tailed Duck was observed in pairs daily from May 29th to June 7th (p. 243). It was found breeding only here. Two families of young were seen between August 18th and 21st; and small parties of old males were then preparing to migrate (p. 245).

King Charles Islands. Seen on June 24th six miles from the south point of Barentine Island; and a pair also seen approaching the land (p. 249).

SOMATERIA MOLLISSIMA.

Whale's Point Harbour. May 29th to June 7th. Eiders seen in some numbers (p. 243). August 18th to 21st: old and young recorded (p. 245).

King Ludwig Islands. June 12th to 14th: breeding in great numbers on Barentine Island (p. 247).

Ryk-Ys Islands. Found breeding very numerously on July 30th (p. 249).

Olya Straits. Some flights observed in June, but no breeding-places were found (p. 252).

SOMATERIA SPECTABILIS.

Whale's Point Harbour. A few King-Eiders seen from June 5th to 7th (p. 243); and an old male in full moult killed between August 18th and 21st (p. 245).

King Ludwig Islands. Two old males were seen on June 17th, which led us to suspect that this species bred on these islands (p. 247).

PHALAROPUS FULICARIUS.

Whale's Point Harbour. The first Grey Phalarope to arrive was a male on the 19th of May; others followed to June 7th, but only one female was seen to that date (p. 242). Between August 18th and 21st it was found breeding at Decvie Bay, Walter Thymen Straits, and elsewhere (p. 245).

King Ludwig Islands. June 12th to 14th: observed in parties of from six to fifteen (p. 247). Eggs were found on Barentine Island (p. 246). Had already departed from this island in August, and also from Whale's Point Harbour and neighbourhood (p. 248).

Ryk-Ys Island. On July 30th many males were observed in full moult (p. 249).

TRINGA ALPINA.

Whale's Point Harbour. "I observed an old male of this species on the 5th of June, on a marshy tract on a tongue of land free from snow" (p. 242).

King Ludwig Islands. Barentine Island, August 22nd: "A single female shot from among *Tringa maritima*. Obviously on migration" (p. 247).

The Dunlin is new to the ornis of Spitsbergen (p. 254).

[Colonel Feilden picked up at Green Harbour, on July 4th, 1894, the withered wings of a bird which, there can be little doubt, were referable to *Tringa alpina* (Zoologist, 1895, p. 88).—W. E. C.]

TRINGA CANUTA.

King Ludwig Islands. Barentine Island, August 22nd: "An old male killed. On migration" (p. 247).

The Knot is a bird new to the ornis of Spitsbergen (p. 254).

TRINGA MARITIMA.

Whale's Point Harbour. May 29th to June 7th: first observed on May 30th, and then daily arrivals (p. 242). Observed everywhere in families and great flights, between 18th and 21st of August (p. 244).

King Ludwig Islands. A few pairs only, between June 12th and 14th. In August in flocks on migration (p. 247).

Ryk-Ys Islands. A single pair breeding on July 30th (p. 248).

CALIDRIS ARENARIA.

King Ludwig Islands. Barentine Island, August 22nd: "One example on migration" (p. 248).

The Sanderling is described as new to the ornithology of Spitsbergen at p. 254.

[Dr. Walter was quite entitled to regard this species as new to the avifauna of Spitsbergen, inasmuch as it had never before been recorded for the archipelago. Indeed his specimen has by some years the precedence over other records, although Mr. Pike obtained a specimen, and saw others, in August 1888.

The Sanderling appears to be a regular visitor in small numbers to the archipelago, for Mr. Bruce has shown me an adult female, in summer plumage, which he obtained at Amsterdam Island on the 15th of August, 1898.—W. E. C.]

STERNA MACRURA Naum.

Whale's Point Harbour. The Arctic Tern appeared on the 3rd of June, and afterwards became an abundant breeding species (p. 244).

Ryk-Ys Islands. Breeding in great numbers on July 30th (p. 249).

King Charles Islands. Observed commonly on the 12th of August (p. 250).

Olga Straits. In small parties at the beginning of August (p. 251).

LARUS GLAUCUS.

Whale's Point Harbour. May 29th to June 7th. The Glaucous Gull was one of the commonest birds (p. 243) and a breeding species (p. 246).

King Ludwig Islands. June 12th to 14th: numerous (p. 247).

King Charles Islands. One seen (p. 249)*.

Olga Straits. Everywhere in small numbers (p. 251).

* Mr. Pike saw a few Glaucous Gulls here on August 20th, 1897 (Geogr. Journ. xi. p. 368).

LARUS TRIDACTYLUS.

Whale's Point Harbour. May 29th to June 7th : Kittiwakes seeking breeding-places (p. 243). August 18th to 21st : observed in thousands (p. 246).

King Ludwig Islands. June 12th to 14th : abundant (p. 246).

Ryk-Ys Islands. July 30th : many breeding colonies (p. 248).

King Charles Islands. Many seen on the coast on August 12th. Probably breeds on the islands * (p. 250).

Barents Island. Observed moving south on the night of August 5th-6th, along with *Lestris pomarina* and *L. parasitica* (p. 250).

Olga Straits. Abundant in small flocks during June and July (p. 251).

LARUS EBURNEUS.

Whale's Point Harbour. The Ivory Gull was occasionally observed between May 20th and June 7th ; and a single example only seen between August 18th and 21st (pp. 244 & 246).

King Ludwig Islands. Seen in numbers, but not breeding, June 12th to 14th (p. 247).

Ryk-Ys Islands. Common, but not breeding, July 30th (p. 249).

King Charles Islands. One observed (p. 250).

Barents Island. One seen between August 5th and 6th (p. 250).

Olga Straits. Observed in great numbers on the edge of the ice (251).

[At Cape Weissenfels, Swedish Foreland, Mr. Pike, in August 1897, observed the Ivory Gull breeding along with Kittiwakes and Mandt's Guillemots (Geogr. Journ. xi. p. 368).—W. E. C.]

* Mr. Pike found it breeding at Cape Weissenfels, Swedish Foreland, along with Ivory Gulls and Mandt's Guillemots, in August 1897 (Geogr. Journ. xi. p. 368).

LESTRIS POMARINA. [*Stercorarius pomatorhinus.*]

King Charles Islands. A Pomatorhine Skua observed on the 12th August (p. 250).

Barents Island. Observed on the night of August 5th–6th with *Larus tridactylus* and *Lestris parasitica*, flying in troops of from five to fifteen individuals, from north to south along the low-lying strips. As this species was not seen until the end of July, it is inexplicable where the “crowds” seen in August came from (p. 250).

Olga Straits. Appeared at the end of July, and became frequent at the beginning of August (p. 251).

[Regarding the numbers seen by Dr. Walter, it is interesting to recall the fact that the Rev. E. A. Eaton (‘Zoologist,’ 1874, p. 3812) also noted the abundance of this species in August in Hinlopen Strait, and at Low Land on the north coast. I am afraid it is not possible, in the present state of our knowledge of the summer distribution of this species, to form an opinion whence these crowds of migrants came. Parry observed it in 82° N., while sledging northward of Spitsbergen.—W. E. C.]

LESTRIS PARASITICA. [*Stercorarius crepidatus.*]

Whale’s Point Harbour. Richardson’s Skua was a very abundant species and observed far inland (pp. 244 & 246).

King Ludwig Islands. June 12th to 14th: many pairs observed (p. 247).

Ryk-Ys Islands. Only one of the dark form seen on the North Island on July 30th (p. 249).

Barents Island. Observed on the night of August 5th–6th, along with Pomatorhine Skuas and Kittiwakes, moving south (p. 250).

Olga Straits. Everywhere, and increasing in numbers and frequency to the beginning of August, both black- and white-bellied forms being found (p. 251).

LESTRIS BUFFONI. [*Stercorarius parasiticus* (L.).]

East Coast of Barents Island. The Long-tailed or Buffon’s Skua was twice seen on the 5th of August on the firm ice (p. 251).

URIA BRUENNICHII Cab.

Whale's Point Harbour. Brünnich's Guillemot was breeding in small numbers (p. 245).

King Ludwig Islands. Observed between June 12th & 14th, but does not breed on so flat an island [Barentine I.] (p. 245).

Ryk-Ys Islands. Observed on July 30th, but does not breed (p. 249).

King Charles Islands. Observed and probably breeds (p. 249).

Olga Straits. The commonest species noted, but does not breed anywhere on the shore of the Straits (p. 251).

URIA GRYLLE L. var. MANDTII Licht.

Whale's Point Harbour. May 29th to June 7th: Mandt's Guillemot was very abundant (p. 243).

King Ludwig Islands. A numerous breeding species (pp. 246 & 248).

Ryk-Ys Islands. One seen on July 30th, and a pair probably breeding (p. 249).

Olga Straits. Everywhere in small numbers (p. 251).

[At Cape Weissenfels, Swedish Foreland, in August 1897, Mr. Pike observed Mandt's Black Guillemot breeding, along with Kittiwakes and Glaucous Gulls (Geogr. Journ. xi. p. 368).—W. E. C.]

MERGULUS ALLE.

Whale's Point Harbour. Little Auks seen in small flocks, May 29th to June 7th (p. 243). Breeding in small numbers, August 8th to 21st (p. 245).

King Ludwig Islands. Abundant in June (p. 247); and young observed, under stones, in August (p. 247).

King Charles Islands. Noted, and probably breeds (p. 249).

Olga Straits. Seen singly and in flocks (p. 251).

MORMON ARCTICUS.

Whale's Point Harbour. A Puffin was observed on the 18th of August. This bird is one of the greatest rarities in East Spitsbergen (p. 245).

Olga Straits. Seen twice during our stay of two months in the straits, two being observed off the east coast of Edge Island, and one in the middle of the straits. These were probably accidental appearances of an otherwise absent bird from the Eastern Spitsbergen seas (p. 252).

COLYMBUS SEPTENTRIONALIS.

Whale's Point Harbour. A male Red-throated Diver arrived on the 31st of May, a female on the 2nd of June (p. 243). Two pairs were observed with young between August 18th and 21st (p. 245).

PROCELLARIA GLACIALIS.

Whale's Point Harbour. The Fulmar was a common species, having breeding-stations at Whale's Point and Deevie Bay (pp. 244 & 246).

King Ludwig Islands. Abundant round Barentine Island, June 12th to 14th (p. 247).

Ryk-Ys Islands. Observed on July 30th (p. 249).

King Charles Islands. Observed (p. 250).

Olga Straits. Fairly common, but does not appear to breed on the shores of the straits (p. 252).

In conclusion, I would enter a protest against the omission, or rather exclusion, of *Rhodostethia rosea* from the Ornis of the Spitsbergen seas. It is impossible to doubt the accuracy of the definite statements made by Commander Ross, the discoverer of the species, and contributed to the appendix of Parry's 'Polar Voyage' (p. 195). Here he avers that "several were seen during our travels over the ice, and as far north as the Expedition went"; while in the narrative of the sledging journey northward it is referred to as being observed on no fewer than five occasions (*op. cit.* pp. 81, 87, 89, 101, 110) *.

* [*Cf.* Saunders, in 4th ed. Yarrell's 'British Birds,' iii. p. 581. A similar protest might well be made against the exclusion of *Xema sabini*: *cf.* tom. cit. p. 576.—EDD.]